

For further information, please contact an inspector at any of our regional offices listed below.

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**[www.dmp.wa.gov.au/ResourcesSafety](http://www.dmp.wa.gov.au/ResourcesSafety)**

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This publication is available on request in other formats for people with special needs.

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#### For publication orders

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**The advice provided in this pamphlet is basic safety and health information. Ensure you are familiar with your site procedures and, if uncertain, discuss this information with your supervisor and safety and health representative.**

## Mine safety matters

# Hazardous substances



## THE HAZARDS

Exposure to a hazardous substance can cause pain, injury, serious illness or death.

How hazardous a substance is depends on:

- its ingredients — what it is made of
- the exposure route — the way it enters the body, such as inhaled through the lungs, absorbed through the skin or ingested through the mouth
- the dose — the amount that enters the body. The dose depends on the toxicity of the substance and extent and duration of the exposure

Some hazardous substances can build up concentrations in the body over time with very harmful effects.

All radioactive material or equipment is hazardous and should only be handled by authorised personnel according to the site's radiation management plan.

## WHAT CAN HAPPEN

Harm to health following exposure may be sudden (acute), such as an eye or skin irritation, or it may occur slowly over years (chronic), such as nerve damage or cancer. Possible health effects include:

- dizziness or nausea, such as from exposure to explosives fumes or solvents
- burns, such as caustic or acid burns
- poisoning, such as cyanide or lead poisoning
- lung disease, such as asthma, silicosis or asbestosis.

## SAFE WORK PRACTICES

- Identify the hazardous substances you use or are exposed to in your job. Do not forget those that may be generated by work activities (e.g. silica dust, welding fumes, diesel exhaust)
- Undertake a risk assessment before introducing a hazardous substance to a workplace. Consider:
  - if the substance is absolutely required for the purpose
  - whether there is a safer alternative
  - if the substance and its waste can be disposed of with no harmful effects
  - what quantity is required to be kept and how to safely store it
  - if a licence or permit is required and whether there are any legislated safety requirements for the substance

- Put controls in place to reduce the risk of exposure to employees
- Find out about the hazardous substances you may be exposed to — ask your supervisor
- Find out how hazardous a substance can be and the requirements for safe usage as shown on its material safety data sheet (MSDS) and the material packaging
- Ensure regular atmospheric contaminant monitoring is undertaken where a risk assessment indicates that employees may be exposed to an airborne hazard
- Ensure you are provided with all required control measures, such as local exhaust ventilation, ventilation ducting and suitable personal protective equipment (PPE) and clothing
- Follow the safe working procedures on the MSDS
- Know the first aid procedures in case of exposure to a hazardous substance
- Know the location of the nearest safety shower or eyewash in case of an emergency
- Never decant hazardous substances into unlabelled containers for use or storage, or mix with other substances without knowing that it is safe to do so
- Correctly wear and properly store personal protective equipment (PPE), including respirators, gloves, aprons, goggles and glasses that are provided
- Do not eat, drink or smoke while working with a hazardous substance
- Wash hands and exposed skin thoroughly when finished

- Dispose of hazardous substances safely, and ensure containers and used PPE and clothing are cleaned or disposed of correctly after use
- Do not carry out hot work on or near containers that have held flammable or other hazardous materials
- Participate in occupational hygiene monitoring to measure your exposure to a contaminant

For further advice, refer to Part 7, Division 3 — Hazardous Substances of the Mines Safety and Inspection Regulations 1995, the *Management of hazardous substances on minesites* guideline available at [www.dmp.wa.gov.au/ResourcesSafety](http://www.dmp.wa.gov.au/ResourcesSafety) and *Provision of information on hazardous substances at workplaces — Material Safety Data Sheets (MSDS)* guidance note available at [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au)

# Hazardous substances

